

U.S. Application No.: 09/509,626  
AMENDMENT D

ATTORNEY DOCKET: 3926.004

REMARKS

Claims 1-10 are pending. Claim 1 has been amended for clarity and claim 3 has been amended to provide antecedent basis.

Basically, in the present Office Action, the Examiner withdraws the rejections of record, and presents new rejections based on a new primary reference, Lazaris-Brunner et al. (US 5,956,620), relying on Ostman and Krasner now as secondary references.

Applicants first briefly discuss the distinguishing features of the present invention.

The present invention involves a process for simultaneously receiving and processing different radio standards. Multiple various modulation types of radio standards (for example, CDMA/GSM or GPS or even TV signals; see claim 7 reciting superposing of a CDMA-encoded and a OFDM-encoded signal) are subject to analog signal processing and are subsequently superposed in a single radio receiver. Thereafter the multiple various modulation types of radio standards are separated by digital signal processing.

Lazaris-Brunner et al. has no relevancy to the present process since the only disclosure is of an analog processor for use with digital satellites - i.e., all signals having the same modulation and the same radio standard.

More specifically, beams 1-N (10) all have the same modulation and thus the same radio standard, namely that of a

common digital satellite communication (see col. 6, lines 62-66) and thus there is no simultaneous reception of different radio standards.

Thus, there is no superposition of different radio standards in the radio receiver.

Thus, there can be no separation of the multiple various modulation types of radio standards in the subsequent digital signal processing. This obviously follows from the fact that Lazaris-Brunner et al. do not disclose any simultaneous reception of different radio standards.

Turning now to the specific position of the Examiner, the paragraphing of the Examiner is adopted.

**Paragraphs 2-3**

The Examiner rejects claims 1-3, 8 and 10 under 35 U.S.C. §102(e) as anticipated by Lazaris-Brunner et al.

Applicants respectfully traverse.

The Examiner cites different parts of the text of Lazaris-Brunner et al. for teaching different limitations of claims 1 and 10. However, the Examiner does not cite any part of Lazaris-Brunner et al. for teaching receiving different radio standards in a single receiver, or the processing of multiple various modulation types of radio standards.

Lazaris-Brunner et al. only disclose an analog processor for use with digital satellites - i.e., all signals having the same modulation and the same radio standard. Referring to Fig. 3 referenced by the Examiner, beams 1-N (10) all have the same

modulation and thus the same radio standard, namely that of a common digital satellite communication (see col. 6, lines 62-66) and thus there is no simultaneous reception of different radio standards.

Thus, there is no superposition of different radio standards in the radio receiver, and no subsequent separation.

Withdrawal of the rejection is respectfully requested.

**Paragraph 4**

The Examiner rejects claims 4 and 5 under 35 U.S.C. §103 (a) as obvious over Lazaris-Brunner et al. in view of Ostman.

Applicants respectfully traverse.

Mixing (claim 4) and amplification (claim 5) are of course well known. However, neither Lazaris-Brunner et al. nor Ostman teach the essential and distinguishing characteristic of the present claims, namely receiving different radio standards in a single receiver, and processing multiple various modulation types of radio standards.

The present invention is directed toward improving the processing efficiency of various radio standards, particularly combined processing of various radio standards in a single, or multi-mode, radio receiver (see pp.2-3 of the specification). The invention comprises the steps of analog signal processing, superposing multiple various modulation types, and digital signal processing.

A particular advantage of the present invention is that, in comparison to hitherto conventional systems, fewer hardware

components are required. Thereby, A/D converters for mixers and filters can be saved.

Applicant first notes that, in order to support a prima facie case of obviousness, the cited art must collectively teach or suggest all of the elements of the claim. Lazaris-Brunner et al. was cited as teaching the step of "superposing multiple various modulation types of radio standards in a single radio receiver." Applicant respectfully submits that it has been shown above that any such teaching is absent in Lazaris-Brunner et al. In contrast, as disclosed at pages 3 and 4 of the specification, the term "superposing multiple various modulation types of radio standards in a single radio receiver" is taught as meaning, at the least, that two modulated signals are combined or added within a single radio receiver, for example in the manner shown in Fig. 2 of the present application directly under the term "ZF1".

The deficiency in Lazaris-Brunner et al. is not remedied by Ostman.

Therefore, Applicant asserts that neither Lazaris-Brunner et al. nor Ostman teaches or suggests the step of "superposition of multiple various modulation types of radio standards in a single radio receiver" and so their combination cannot render claims 4 or 5 obvious. MPEP 2143.03.

Accordingly, Applicant asserts that a prima facie case of obviousness has not been established, and respectfully requests that the rejection of claims 4 and 5 be withdrawn

**Paragraph 5**

The Examiner rejects claim 6 under 35 U.S.C § 103(a) as obvious over Lazaris-Brunner et al. in view of Krasner.

Applicants respectfully traverse.

Claim 6 recites that a special HF-filter with level accommodation and band selection is employed. However, as claim 6 is a dependent claim, all limitations must be taken into consideration. None of the cited references teaches the characterizing features of claim 1 from which claim 6 depends.

Accordingly, dependent claim 6 is allowable by virtue of it's dependency from allowable claim 1.

Withdrawal of the rejection is respectfully requested.

**Paragraph 6**

The Examiner rejects claim 7 under 35 U.S.C § 103(a) as obvious over Lazaris-Brunner et al. and Krasner in view US 5,963,593 (Kim).

Applicants respectfully traverse.

Claim 7 recites that a superposing of a CDMA-encoded and a OFDM-encoded signal is carried out.

However, as claim 7 is a dependent claim, all limitations must be taken into consideration. None of the cited references teaches the characterizing features of claim 1 from which claim 7 depends.

Accordingly, dependent claim 7 is allowable by virtue of it's dependency from allowable claim 1.

Withdrawal of the rejection is respectfully requested.

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**Paragraph 7**

The Examiner rejects independent claim 9 under 35 U.S.C § 103(a) as obvious over Lazaris-Brunner et al. and US 6,061,338 (O).

Applicants respectfully traverse.

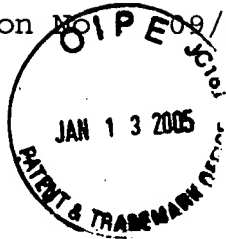
Claim 9 is similar to claim 1 but further requires that in the receiving and superposing multiple various modulation types of radio standards there be included at least one CDMA encoded signal.

As discussed in great detail above, the primary reference - Lazaris-Brunner et al. - does not teach the basic inventive features of the present claims.

Thus, the teaching of O of a CDMA encoded signal as a modulation type does not remedy the deficiency in the primary reference.

Withdrawal of the rejection is respectfully requested.

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If the Examiner does not consider that the present application is now in condition for allowance, **Applicant hereby requests the courtesy of a telephone interview at the Examiner's convenience**, in which any remaining impediments to issuance may be addressed.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Stephan A. Pendorf".

Stephan A. Pendorf  
Registration No. 32,665

PENDORF & CUTLIFF  
5111 Memorial Highway  
Tampa, Florida 33634  
(813) 886-6085

Date: **January 10, 2005**

CERTIFICATE OF MAILING AND AUTHORIZATION TO CHARGE

I hereby certify that the foregoing AMENDMENT D for U.S. Application No. 09/509,626 filed March 30, 2000, was deposited in first class U.S. mail, postage prepaid, addressed: Attn: Mail Stop: AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA. 22313-1450 on **January 10, 2005**.

The Commissioner is hereby authorized to charge any additional fees which may be required at any time during the prosecution of this application, except for the issue fee, without specific authorization, or credit any overpayment, to Deposit Account No. 16-0877.

A handwritten signature in black ink, appearing to read "Stephan A. Pendorf".

Stephan A. Pendorf